

PATENT SPECIFICATION

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DRAWINGS ATTACHED

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(54) SURGICAL DRESSINGS

(71) We, EDWARD TAYLOR LIMITED, a Company organised under the laws of Great Britain, of Montonfields Road, Monton, Eccles, Manchester, Lancashire, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention relates to surgical dressings, and is especially concerned with a new form of surgical dressing.

It is normal practice nowadays to close wounds such that they may heal by drawing the edges of the wound together by means of clips or suturing, or by covering the wound with adhesive plaster. When the wound has healed the clips or sutures are removed or the plaster is peeled off. These methods have disadvantages. The first, that of clipping or suturing the wound, has the disadvantage that the skin on either side of the wound is not drawn together uniformly, so that in the first place healing is retarded, and secondly a non-linear scar may remain. The disadvantage of using a covering plaster is that air is not allowed to reach the wound.

It is the object of the present invention to provide a surgical dressing which may take the place of the above, which enables the skin on either side of the wound to be drawn together uniformly, and which allows at least part of the wound to be exposed.

35 According to the invention a surgical dressing comprises two strips of adhesive coated material, the first strip having a central aperture and the second strip having a portion of reduced width centrally thereof, the dressing being assembled by passing part but not all of the second strip through the central aperture of the first strip.

In one embodiment of the invention the first strip comprises two smaller strips (or sub-strips) joined together by two thin con-

necting bands, the connecting bands joining the respective adjacent edges of the sub-strips at their extremities so as to leave a central aperture. The second strip also comprises two smaller strips (or sub-strips), but in this case the sub-strips are joined together by thin connecting bands which join their respective adjacent edges inwards of their extremities. The dressing may then be assembled by passing one of the sub-strips of the second strip through the central aperture of the first strip. In its assembled form one sub-strip of the first strip lies beneath one sub-strip of the second strip, and the other sub-strip of the first strip lies above the other sub-strip of the second strip.

The two strips are preferably made by punching and cutting from a continuously formed length of adhesive coated material, and advantageously they are of such shape that the same punch may be used to form both strips. Thus, in a preferred embodiment, the central aperture in the first strip has a shape compounded of two shapes which are cut or punched out of the second strip to form the reduced central portion thereof. For example, if the central aperture in the first strip is elliptical in shape, the reduced central portion, or "waist" of the second strip is produced by punching out semi-elliptical portions from opposing edges of the central portion of the strip. In another embodiment the central aperture of the first strip is generally rectangular in shape, preferably with rounded corners.

After assembling the dressing it is applied to the wound by applying one sub-strip of the first strip to one side of the wound and one sub-strip of the second strip to the other side of the wound. The other sub-strip of the first strip and the other sub-strip of the second strip are then pulled in opposite directions, and this has the effect of pulling the two sub-strips which are attached to the

skin on either side of the wound towards each other, thus closing the wound. The other two sub-strips are then attached to the skin and/or any portions of the other two sub-strips which they overlie.

Preferably the central portions of the two strips are free from adhesive material, which covers the remainder of the sides of the strips which are to be in contact with the skin on either side of the wound. Alternatively, the whole of the skin-contacting sides of the strips may be adhesive-coated, but with the central portions covered by masking material, for example "Cellophane" (Trade Mark).

The two strips of the dressing of the invention are preferably coded in some way, in order that the manner of application of the dressing is immediately apparent to the person applying the dressing. For example, one sub-strip of the first strip and one sub-strip of the second strip may be coloured, say, blue, and the other two sub-strips may be coloured, say, red, the instructions accompanying the dressing indicating that the blue portions are to be applied to the wound first, following which the red portions are pulled apart and then applied to the skin. As an alternative, this colour coding system may be applied to the readily removable protective strips of material which may be applied to the strips in a manner known per se and which serve to protect the adhesive until such time as the dressing is required for use and the protective strips are peeled off. Such protective strips are normally of paper covered with a silicone compound or another release agent.

The strips which make up the dressing of this invention may be made from any material which is substantially inextensible in one direction, the dressing being applied so that this direction is transverse to the wound. Thus, plain weave plaster cloth and elastic cloth are especially suitable, as also are thin sheet plastics materials. The latter are particularly advantageous if, as may be desired, the dressing is to be transparent, in order that the healing progress of the wound may readily be inspected. The adhesive material coating the strips may be any conventionally used in adhesive dressings.

The invention is illustrated by means of the accompanying drawings, wherein

Figure 1 is a plan view of a first strip of one form of dressing;

Figure 2 is a plan view of a second strip of the same form of dressing;

Figure 3 is a diagrammatic side view of the dressing formed by assembling the first and second strips together;

Figure 4 is a plan view of the dressing as applied to a wound;

Figures 5 and 6 are views of lengths

of material from which may be cut the strips of Figures 1 and 2, respectively;

Figure 7 is an underneath plan view of a first strip of a second form of surgical dressing;

Figure 8 is an underneath plan view of a second strip of said second form of dressing;

Figures 9 and 10 are views of lengths of material from which may be cut the first and second strips of Figures 7 and 8, respectively; and

Figures 11 and 12 are views of lengths of material from which may be cut the first and second strips of a third form of dressing.

With reference to Figures 1 and 2 of the drawings, the first strip comprises a simple strip of adhesive-coated material 1 having a central aperture 2. This can be regarded as two sub-strips 3 and 4 connected together by interconnecting bands 5 and 6. The second strip 10 (Figure 2) may be regarded as two sub-strips 11 and 12 interconnected by connecting bands 13 and 14.

The surgical dressing is assembled by passing sub-strip 11 through aperture 2, it being necessary slightly to fold sub-strip 11 in order to effect this. The dressing then has, on assembly, the form diagrammatically shown in Figure 3, with sub-strip 3 lying above sub-strip 11 and sub-strip 12 lying above sub-strip 4. Sub-strips 3, 4, 11 and 12 are provided on their adhesive-coated faces with layers of readily releasable protective material, e.g. silicone-coated paper or plastics material. These are not shown, for the sake of simplicity.

The dressing is applied to a wound in the following manner. If, with reference to Figure 3, the wound is at the position marked X, the protective layers are removed from sub-strips 4 and 11 and these strips are adhered to the skin, one on each side of wound X. The protective backing layers are then removed from sub-strips 3 and 12 and these sub-strips are pulled apart in the directions of the arrows Y and Z. This pulling apart of sub-strips 3 and 12 causes sub-strips 11 and 4 to move towards each other, thus drawing up the skin on either side of wound X. Finally the sub-strips 3 and 12 are stuck to the skin on either side of sub-strips 11 and 4, overlying the latter strips if necessary. The final configuration of the dressing when applied to the wound X is as shown in Figure 4.

It will be appreciated that the dressing of the invention is extremely simple to manufacture. Thus, for example, a strip of dressing material may be manufactured in conventional manner, and then cut and punched to provide the individual strips having the necessary apertures and interconnections. For example, a number of

strips 1 may be formed by weaving a continuous length of material 20 (see Figure 5) punching out central apertures 2, and then cutting along the lines 21. Strips 10 may be manufactured by weaving a continuous length of material 30 (see Figure 6), punching out apertures 31 and 32 to produce interconnecting bands 13 and 14, and then cutting along the lines 33. The strips 20 and 30 will be adhesively backed and provided with lengths of protective material which will be removed before application to the skin.

Referring now to Figures 7 to 10, the first strip of this second form of the invention comprises a strip of adhesive-coated material 1 having a central aperture 2. This may also be regarded as two sub-strips 3 and 4 connected together by interconnecting bands 5 and 6. The second strip 10 (Figure 8) may be regarded as comprising two sub-strips 11 and 12 interconnected by a waisted portion 13. It will be seen that the central aperture 2 of strip 1 is exactly twice the size of each of the cut-outs forming the waisted portion 13 of strip 10. Thus, in the specific example illustrated, the central aperture 2 is elliptical in shape and the two cut-outs forming the waisted portion 13 are semi-elliptical in shape. Such a construction has the great advantage that a single punch member may be used to produce both strip 1 and strip 10 from lengths of strip-forming material. Thus, with reference to Figures 9 and 10, a number of strips 1 may be formed by weaving a continuous length of material 20, punching out central apertures 2, and then cutting along the lines 21. Strips 10 may be manufactured by weaving a continuous length of material 30, forming the waisted portions 13 by means of the same punch as was used to punch out central apertures 2, and then cutting along the lines 33. It will be appreciated that the dressing illustrated is only an example of this feature of the invention. Thus, aperture 2 may have other shapes than elliptical, the cut-outs forming portion 13 being correspondingly shaped.

Strip 1 is backed, i.e. before application to the skin, with protective strips such as paper or plastic strips 40 and 41, and similarly strip 10 is protected with similar strips 42 and 43. The mode of application of the dressing shown in Figures 7 to 10 is identical with that described in connection with Figures 1 to 6. In order to assist the person using the dressing the two sub-strips to be applied first to the skin, i.e. what might be termed the anchor sub-strips, may be protected with protective strips of a similar colour, these strips being coloured differently from the protective strips applied to the other two sub-strips. Thus, for example, protective strips 41 and 42 may have a

blue colouration, the other two protective strips being white or another colour different from blue.

Preferably the central portions of the two strips making up the dressing, i.e. interconnecting bands 5 and 6 of strip 1 and waisted portion 13 of strip 10, are free from adhesive. This may be achieved either by not coating the central portions, or by coating them at the same time as the sub-strips and then masking them. For example, strips of "Cellophane" (Trade Mark) may be applied to the central longitudinal portions of lengths 20 and 30. When the individual strips are cut and punched out from these lengths, the "Cellophane" remains in contact with the central portions of the strips.

Figures 11 and 12 illustrate lengths of material (similar to those of Figures 3 and 4) for producing dressings in which the central apertures 42 are generally oblong-shaped but with rounded ends, and the cut-outs forming waisted portions 43 are correspondingly shaped.

WHAT WE CLAIM IS:—

1. A surgical dressing comprising two strips of adhesive coated material, the first strip having a central aperture and the second strip having a portion of reduced width centrally thereof the dressing being assembled by passing part but not all of the second strip through the central aperture of the first strip.
2. A dressing as claimed in claim 1 wherein the first strip comprises two sub-strips joined together by two thin connecting bands, the connecting bands joining the respective adjacent edges of the sub-strips at their extremities so as to leave a central aperture, and the second strip comprises two sub-strips joined together by thin connecting bands which join their respective adjacent edges inwards of their extremities.
3. A dressing as claimed in claim 1 wherein the central aperture in the first strip has a shape compounded of two shapes cut out of the second strip to form the portion of reduced width thereof.
4. A dressing as claimed in claim 3 wherein the central aperture in the first strip is elliptical in shape.
5. A dressing as claimed in claim 3 wherein the central aperture in the first strip is generally rectangular in shape.
6. A dressing as claimed in any of claims 1 to 5 wherein the central portions of the first and second strips are free from adhesive material.
7. A dressing as claimed in any of claims 1 to 5 wherein the central portions of the first and second strips are covered with masking material.
8. A dressing as claimed in any of

claims 1 to 7 wherein the adhesive material on the strips is covered by readily removable protective strips.

9. A dressing as claimed in any of 5. claims 1 to 8 wherein the strips are of a transparent material.

10. A surgical dressing substantially as hereinbefore described with reference to the accompanying drawings.

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